AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

What is claimed is:

1. (Currently amended) A method for improving suspension characteristics and fluid loss control of a synthetic invert emulsion drilling fluid ~~with a minimal number of components for use in offshore drilling~~, said method comprising adding to said synthetic invert emulsion drilling fluid a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers, without adding to the drilling fluid and without ~~or~~ the drilling fluid otherwise comprising fluid loss control agents, filtration control agents or organophilic clays, and without significantly thickening the drilling fluid in offshore drilling conditions comprising temperatures ranging from about 40°F to about 120°F, such that said drilling fluid shows improved suspension characteristics and fluid loss control, has progressive gel behavior in offshore conditions and has a laboratory Stress Build Index in the range of about 1 to about 2 at 120°F and/or a laboratory Gel Progression Index in the range of ~~about 0~~ about 0.3 to about 10 at 120°F.

2. (Previously presented) The method of claim 12 wherein a laboratory prepared sample of said fluid comprising said polymer has a Stress Build Index in the range of about 1 to about 2 at 120°F.

3. (Currently amended) The method of claim 12 wherein a laboratory prepared sample of said fluid comprising said polymer has a Gel Progression Index in the range of ~~about 0~~ about 0.3 to about 10 at 120°F.

4. (Previously presented) The method of claim 12 wherein a laboratory prepared sample of said fluid comprising said polymer has a Gel Progression Index in the range of about 0.3 to about 7 at 120°F.

5. (Previously presented) The method of claim 12 wherein a laboratory prepared sample of said fluid comprising said polymer has a Gel Progression Index in the range of about 0.6 to about 2 at 120°F.

6. (Previously presented) The method of claim 1 wherein a laboratory prepared sample of said fluid comprising said polymer has a yield stress less than about 15 at 120°F.

7. (Previously presented) The method of claim 1 wherein said fluid comprising said polymer does not exhibit sag.

8. (Previously presented)The method of claim 1 wherein said polymer is an emulsion copolymer of 2-ethylhexyl acrylate and acrylic acid.

9. (Previously presented) The method of claim 12 wherein said improved suspension characteristics are obtained without the addition of organoclays to said drilling fluid.

10. (Previously presented) The method of claim 12 wherein said polymer enhances fluid loss control without the addition of a fluid loss control additive.

11. (Previously presented) The method of claim 12 wherein said polymer provides filtration control to the drilling fluid without the addition of a filtration control additive.

12. (Previously presented) A method for improving suspension characteristics of a drilling fluid, said method comprising adding to said drilling fluid a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers, and wherein said polymer comprises vinyl neodecanoate, such that said drilling fluid shows progressive gel behavior.

13. (Previously presented) The method of claim 1 wherein the fluid comprises an oil base selected from the group consisting of esters, olefins, paraffins, and combinations thereof.

14. (Currently amended) A method of drilling in a subterranean formation comprising drilling a borehole in the subterranean formation and employing in said drilling a synthetic invert emulsion based drilling fluid having a minimal number of components that uses a polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers to provide said drilling fluid with suspension characteristics for suspending weighting agent and drill cuttings, with fluid loss control, and with filtration control, without fluid loss control agents, without filtration control agents, without organophilic clays, and without significantly thickening the fluid at temperatures as low as about 40°F, and wherein said drilling fluid can demonstrate progressive gel behavior over a temperature range of about 40°F to about 120°F and has a Stress Build Index in

the range of about 1 to about 2 at 120°F and/or a Gel Progression Index in the range of ~~about 0~~ about 0.3 to about 10 at 120°F.

15. (Previously presented) The method of claim 14 wherein said polymer is an emulsion copolymer of 2-ethylhexyl acrylate and acrylic acid.

16. (Previously presented) A method of drilling in a subterranean formation comprising: drilling a borehole in said subterranean formation and employing in said drilling a synthetic invert emulsion based drilling fluid that uses a polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers, wherein said polymer comprises vinyl neodecanoate, to provide said drilling fluid with suspension characteristics for suspending weighting agent, and wherein said drilling fluid can demonstrate progressive gel behavior.

17. (Previously presented) The method of claim 16 wherein said polymer also imparts fluid loss control to said drilling fluid.

18. (Previously presented) The method of claim 16 wherein said drilling fluid is formulated without the addition of organophilic clays.

19. (Previously presented) The method of claim 16 wherein a laboratory prepared sample of said drilling fluid has a Stress Build Index in the range of about 1 to about 2 at 120°F.

20. (Previously presented) The method of claim 16 wherein a laboratory prepared sample of said drilling fluid has a Gel Progression Index in the range of about 0.6 to about 2 at 120°F.

21. (Previously presented) The method of claim 14 wherein a laboratory prepared sample of said drilling fluid has a yield stress less than about 15 at 120°F.

22. (Previously presented) The method of claim 16 wherein said polymer also imparts filtration control to said drilling fluid.

23. (Canceled)

24. (Previously presented) The method of claim 14 wherein said invert emulsion base comprises an olefin or paraffin.

25. (Previously presented) The method of claim 16 wherein said polymer further provides said drilling fluid with suspension characteristics for suspending drill cuttings.

26. (Previously presented) The method of claim 14 further comprising the steps of:

completing said wellbore; and

producing fluid from said wellbore.

27. (Previously presented) A method for providing a substantially clay free synthetic based drilling fluid comprising: combining a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers in a substantially clay free synthetic invert emulsion based drilling fluid to provide suspension characteristics for suspending drill cuttings when the drilling fluid is used in drilling in a subterranean formation without significantly thickening the drilling fluid at temperatures as low as 40°F and without using fluid loss control agents.

28. (Previously presented) A drilling fluid consisting essentially of:

a synthetic fluid invert emulsion base;

water or brine;

at least one emulsifier;

weighting agent; and

~~a~~ an emulsion copolymer of 2-ethylhexyl acrylate and acrylic acid in a ratio ranging from about 99:1 to about 85:15, such that the copolymer comprises mostly hydrophobic monomers and a smaller amount of hydrophilic monomers and is substantially free of aromatic hydrocarbon monomers; and wherein the fluid maintains effective viscosity, suspension of drill cuttings, and filtration control at temperatures ranging from about 40°F to about 120°F without the addition of viscosifiers, suspension agents, or fluid loss control agents.

29. (Previously presented) The drilling fluid of claim 30 wherein said polymer contains about 40 to about 99% by weight C_{6-10} alkyl acrylate.

30. (Previously presented) A drilling fluid consisting essentially of:

a synthetic fluid invert emulsion base;

water or brine;

at least one emulsifier;

weighting agent; and

a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers wherein said polymer contains vinyl neodecanoate.

31. (Previously presented) The drilling fluid of claim 30 wherein said polymer contains at least about 0.1% acrylic acid.

32. (Previously presented) A method for drilling in a subterranean hydrocarbon bearing formation, said method comprising drilling a borehole in said formation and employing in said drilling a drilling fluid consisting essentially of:

a synthetic fluid invert emulsion base;

water or brine;

at least one emulsifier;

weighting agent; and

a substantially linear polymer comprising mostly polar hydrophobic monomers and a smaller amount of hydrophilic monomers wherein said polymer contains vinyl neodecanoate.

33. (Previously presented) The method of claim 32 further comprising at least one step from the group consisting of:

completing said wellbore; and

producing fluid from said wellbore.

34. (Previously presented) The method of claim 33 wherein said step of completing said wellbore comprises cementing and casing said wellbore.

35. (Previously presented) The method of claim 33 wherein said step of completing said wellbore comprises gravel packing said wellbore.

36. (New) A method for improving suspension characteristics and fluid loss control of a synthetic invert emulsion drilling fluid, said method comprising providing an invert emulsion drilling fluid having a substantially linear polymer comprising

polar hydrophobic monomers and hydrophilic monomers, such that the drilling fluid shows improved suspension characteristics and fluid loss control, has progressive gel behavior in offshore conditions, and has a laboratory Stress Build Index in the range of about 1 to about 2 at 120°F and/or a laboratory Gel Progression Index in the range of about 0.3 to about 10 at 120°F.

37. (New) The method of claim 36 wherein a laboratory prepared sample of the fluid has a Gel Progression Index in the range of about 0.3 to about 7 at 120°F.

38. (New) The method of claim 36 wherein a laboratory prepared sample of the fluid has a Gel Progression Index in the range of about 0.6 to about 2 at 120°F.

39. (New) The method of claim 36 wherein a laboratory prepared sample of the fluid has a yield stress less than about 15 at 120°F.